



MEMORANDUM

Date: January 21, 2019
To: Jewelle Kennedy and Tyson Sayles, Ensemble Real Estate Investments
From: Matt Haynes, Fehr & Peers
Subject: **The Station Development Transportation Consistency Evaluation**

SJ18-1892

"The Station" project is located at 2221 Tasman Drive and 2272 Calle de Luna in Santa Clara, California. The project is located within the Tasman East Specific Plan area and consists of two parcels – Parcel 19 and Parcel 29. Together, the projects will total 503 residential units with about 23,800 square feet of retail space.

The purpose of this memorandum is to demonstrate if the project is consistent with the recently approved Tasman East Specific Plan and associated EIR. Our review focuses on transportation aspects to the project.

Fehr & Peers reviewed the proposed project for consistency with the Tasman East Specific Plan and EIR. Our review focused on the following areas:

- Vehicle Trip Generation and Vehicle Miles Travelled (VMT) Estimates
- Proposed Parking Supply
- Transportation Demand Management Measures

Each of these areas is described below.

TRIP GENERATION

Fehr & Peers estimated vehicle trip generation and expected VMT for the project using the same methodology that was used as part of the Tasman East Specific Plan EIR. That methodology is based on Fehr & Peers' MainStreet trip generation model. The MainStreet model creates adjustments to the Institute of Transportation Engineers (ITE) *Trip Generation Manual* method to account for factors such as land use mix, density and proximity to transit.



For purposes of this evaluation, only the gross project trip generation is reported. Gross project trip generation, which does not account for trips generated by existing land uses, is more appropriate for evaluating site circulation and access patterns, including driveway access configurations and potential vehicle queueing. Net project trips, which would assign a “credit” for existing land uses, are not reported.

As shown in **Table 1** below, the project would generate about 4,050 gross daily vehicle trips, 240 morning peak hour vehicle trips, and 340 evening peak hour vehicle trips, excluding reductions for the existing on-site uses. If existing uses are accounted for, the project would generate slightly fewer vehicle trips.

TABLE 1. THE STATION DEVELOPMENT VEHICLE TRIP GENERATION

Land Use	Units ¹	Quantity	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Apartment	Dwelling Units	503	2,670	42	165	207	147	79	226
Retail	KSF	23.8	1,380	19	11	30	54	60	114
Total Gross Vehicle Trips²			4,050	61	176	237	201	139	340

Notes:

¹ KSF = 1,000 square feet.

Source: Fehr & Peers, 2019

In the future, once early phases of the nearby City Place Santa Clara project are completed, the Station project would generate fewer vehicle trips due to its proximity to nearby employment centers and additional retail destinations. This is because more of these short-distance trips could be made by non-driving modes. Based on the analysis completed as part of the Tasman East Specific Plan EIR, an additional vehicle trip reduction of about 10-15 percent can be expected once Phases 1-3 of City Place are complete and occupied.

Vehicle Miles Travelled

VMT is a measure of the total number of vehicle trips generated by a project multiplied by the average length of each trip. VMT estimates were developed for the Tasman East Specific Plan by extracting the appropriate average vehicle trip lengths from the California Household Travel Survey (CHTS) and applying them to daily vehicle trip estimates.



The most recent California Household Travel Survey (CHTS) was conducted between February 2012 and January 2013. Over 40,000 households from all 58 California counties were surveyed. The Tasman East Specific Plan used average vehicle trip lengths in northern Santa Clara for residential trips. Trip lengths for retail uses were developed by measuring the average trip length that residents of northern Santa Clara would travel on a typical basis to nearby retail centers. The average trip lengths for each land use type are shown in **Table 2**.

TABLE 2. AVERAGE TRIP LENGTHS BY LAND USE

Land Use	Trip Length (mi) ^{1,2}
Apartments	5.8
Retail	2.5

Notes:

¹ Residential average vehicle trip length based on average distance traveled by a worker or resident of the northern Santa Clara, respectively. Trip lengths rounded to the nearest tenth of a mile.

² Retail average vehicle trip length based on vehicle distance to nearby retail centers.

Source: Tasman East Specific Plan, 2018.

The anticipated number of employees and residents on the project site are shown in **Table 3**. Population density estimates are similar to those used in the Tasman East Specific Plan VMT analysis.

TABLE 3. POPULATION BY LAND USE TYPE

Land Use	Unit	Size (A)	Population Density (persons per unit or KSF) (B)	Population ¹ (persons) (A x B = C)
Mixed-Use Development				
Apartments	Dwelling Units	503	2.73	1,374
Retail	KSF	23.8	2.5	59
Project Population Total				1,433

Source: Tasman East Specific Plan, 2018 and Fehr & Peers, 2019.

Daily VMT is calculated by multiplying the daily vehicle trips by average vehicle trip lengths. The daily VMT per capita is calculated by dividing the daily VMT by the project population. As shown in Table 4, the project would generate roughly 18,960 daily VMT and 13.2 VMT per capita.

The VMT per capita metric is useful to distinguish the effects of employment/population growth from the effects of changes in personal travel behavior. By comparing VMT per capita we see that providing housing near jobs increases the likelihood that trips can remain within a local area, thus



shortening travel distances and increasing residents' ability to accomplish some travel needs by walking, cycling, or using short-distance transit.

For informational purposes, the Tasman East Specific Plan EIR reported overall VMT and VMT per capita for the Specific Plan area. Because it comprises only a portion of the Specific Plan area, the project would generate substantially less VMT than the Specific Plan as a whole. However, because VMT per capita normalizes the effect of project size, the results of the VMT per capita calculation are roughly similar between the project and the Specific Plan. The slightly higher VMT per capita for the project is due primarily to the greater proportion of retail trips compared to the Tasman East Specific Plan area as a whole.

TABLE 4. PROJECT VEHICLE MILES TRAVELED SUMMARY

Site	Daily (Vehicle Trips)	Vehicle Miles Traveled (VMT) ¹	Population (persons)	VMT per Capita
The Station Project (Parcels 19 and 29)	4,050	18,960	1,433	13.2
Total Tasman East Specific Plan Area	32,730	157,310	12,600	12.5

Notes:

¹ VMT rounded to the nearest hundred. VMT = Daily vehicle trip x average trip lengths by land use from Table 2.

³ VMT per capita rounded to the nearest tenth. VMT per capita = VMT / population.

Source: Fehr & Peers, 2019.

As a result of the above, we conclude that the project is consistent with previous trip generation estimates and VMT assumptions for the Tasman East Specific Plan area.

PARKING SUPPLY

To evaluate the proposed parking supply consistency in accordance with the Specific Plan requirements, we reviewed the latest project site plans dated December 13, 2018. Based on the proposed project, the proposed parking supply for vehicles and bicycles is as follows:



TABLE 5. PROJECT PARKING SUPPLY

Land Use	Size	Proposed Parking Stalls	Minimum Parking Ratio	Consistent with Specific Plan?
Residential				
Vehicle Parking	503 units	582	0.5 to 1 space per unit; 0.05 spaces per unit for guests	Yes
Bicycle Parking ¹	503 units	252	1 space per 2 units	Yes
Retail				
Vehicle Parking	23.8 ksf	24	1 space per KSF	Yes
Bicycle Parking	23.8 ksf	7	1 space per 3.75 KSF	Yes

Notes:

¹ Residential bicycle parking must be secured Class I parking, which means it should be suitable for long term, secure residential bicycle storage.

Source: Fehr & Peers, 2019.

As a result, the project appears consistent with the parking requirements included as part of the Specific Plan. There are several parking related requirements included in the Specific Plan, such as the unbundling of parking. These, along with other Transportation Demand Management (TDM) measures, are described in the following section.

TRANSPORTATION DEMAND MANAGEMENT MEASURES

Several features of the site location that will help manage the level of automobile traffic to and from the site. Location features include the site's location in close proximity to transit, nearby trail facilities and to complementary land uses (e.g., office and retail uses). Additional project characteristics that could help reduce traffic are referred to as TDM measures.

The Tasman East Specific Plan identified TDM targets for all developments within the Specific Plan area. Specifically, all projects reduce vehicle miles traveled (VMT) by twenty percent relative to the baseline level, with a minimum ten percent VMT reduction resulting from TDM measures. In addition, the City of Santa Clara Climate Action Plan (CAP), developed in 2013, identifies city-wide goals for greenhouse gas (GHG) emission reduction and establishes TDM requirements for some types of development within Santa Clara.



Proposed TDM Measures

Based on the Tasman East Specific Plan requirements, several TDM measures are intended to be a part of the project. The TDM measures described below contribute toward reducing transportation impacts on the surrounding street network and on the climate.

TABLE 5. PLANNED PROJECT TDM MEASURES

Required Tasman East Specific Plan Measures
Limited Parking Supply (per Tasman East Specific Plan Requirements); Dedicated EV Parking
Unbundled Residential Parking (per Tasman East Specific Requirements – parking beyond 1 space/unit to be unbundled)
Participation in Tasman East Transportation Coordination Group (TETCG); includes Transit Pass and Bikeshare programs; Bicycle Repair Facilities; Commute Information/marketing
Transportation Coordinator; Trip Monitoring/Reporting
Bicycle Parking and Amenities (per Tasman East Specific Plan Requirements); Electric scooter corrals
Additional Parcel Specific Measures Currently Proposed
On site amenities to reduce need for off-site trips (fitness center, club room, pool/spa)
Carsharing Spaces (at 1 space per 75 units)

Source: Fehr & Peers, 2019.

TDM Trip Reduction

This section provides an estimate of the VMT reductions associated with the proposed TDM strategies for the project. We compared the features of the project location to determine consistency with the Specific Plan's goal of a 10% VMT reduction due to project location and a 10% VMT reduction due to TDM measures.

TDM reductions were adapted from the California Air Pollution Control Officers Association (CAPCOA) report *Quantifying Greenhouse Gas Mitigation Measures* (2010), which quantifies the VMT reductions associated with typical TDM strategies. The CAPCOA report was developed from a comprehensive evaluation of peer-reviewed literature review of the effectiveness transportation demand management programs.



As indicated below, a combination of design and programmatic strategies would yield a minimum twenty percent reduction in daily VMT. Therefore the project is anticipated to be consistent with the Specific Plan's TDM reduction goals.

TABLE 6. TDM TRIP REDUCTION ESTIMATE

Category	Project Feature or TDM Measure	Type	Estimated VMT Reduction	Primary User Group
Location and Built Environment Factors	- Housing Density	Design	exceeds 10%	All users
	- Land Use Diversity			
	- Destination Accessibility			
	- Transit Accessibility			
	- Pedestrian Oriented Design			
	- Nearby Bicycle Facilities			
Location and Built Environment Factors Subtotal		10%		
TDM	- Participation in TETCG	Program	10-20%	Retail Employees
	- Transportation Coordinator and Trip Monitoring			
	- Limited Parking Supply			
	- Unbundled Parking			
	- Bicycle and Scooter Parking			
	- Carshare Parking			
TDM Program Strategies Subtotal		10%		
Estimated Minimum VMT Reduction		20%		

Source: Fehr & Peers, 2019.